

CLAIMS

We claim:

1. A method of operating an optical disk player comprising:

5 receiving an instruction to read audio, video or audio/video data from an optical disk within the optical disk player, wherein the data is to be provided to an output means at a known playback rate;

reading the data from the optical disk at a rate that is greater than the known playback rate;

10 storing the data on a hard disk as the data is being read;

providing the data to the output means at the known playback rate while the data is being stored;

turning off the optical disk player as soon as the data has been read and stored; and then

15 continuing to provide the data to the output means at the known playback rate by retrieving the data stored on the hard disk.

2. The method of claim 1, wherein the step of turning off the optical disk player includes turning off a spin motor within the optical disk player.

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3. The method of claim 1, wherein the data is selected from all the data on the optical disk or a track of the data on the optical disk, wherein the beginning of each track is identified in a table of contents for the optical disk.

25 4. The method of claim 1, wherein the output means is selected from a speaker, a set of speakers, a video display or combinations thereof.

5. The method of claim 1, further comprising:

converting the data to a different computer readable format before storing the data on the hard disk.

6. The method of claim 5, wherein the format is selected from MP3, WMA, WAV,
5 Ogg, VQF or AAC.

7. The method of claim 5, wherein the format is any format that reduces the memory space required to store the data on the hard disk.

10 8. The method of claim 3, further comprising:

recording in an index database information selected from a title of the optical disk, a title of the track written to the hard disk; or combinations thereof;

comparing the title of the optical disk and the title of track with other titles previously recorded in the index;

15 determining whether the optical disk and the track has previously been written to the hard disk; and

playing the data from the hard disk without re-reading the optical disk if the data has been previously written to the hard disk.

20 9. The method of claim 8, further comprising:

recording information in the index database selected from artist of the track, artist of the optical disk, date the file was last played from the hard disk, or combinations thereof; and

25 arranging data in the index database, wherein the data is arranged in groups selected from alphabetically by artist, alphabetically by titles, or by date the file was last accessed.

10. The method of claim 1, further comprising:

searching the hard disk for presence of the data; and

playing the data from the hard disk without re-reading the optical disk.

11. The method of claim 1, further comprising:

designating in an index database that a first file is to be permanently stored on
5 the hard disk; and

erasing automatically from the hard disk a second file not played for a
designated set period of time and not designated in the index database that the second
file is to be permanently stored on the hard disk, , wherein the first and second files
contain the data stored on the hard disk at different times.

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12. A computer program product comprising:

receiving instructions for receiving an instruction to read audio, video or
audio/video data from an optical disk within an optical disk player, wherein the data
is to be provided to an output means at a known playback rate;

15 reading instructions for reading the data from the optical disk at a rate that is
greater than the known playback rate;

storing instructions for storing the data on a hard disk;

providing instructions for providing the data to output means at the known
playback rate while the data is being stored;

20 turning off instructions for turning off the optical disk player as soon as the
data has been stored; and then

continuing instructions for continuing to provide the data to the output means
at the known playback rate by retrieving the stored data.

25 13. The computer program product of claim 12, wherein the step of turning off the
optical disk player includes turning off a spin motor within the optical disk player.

14. The computer program product of claim 12, wherein the data is selected from all the data on the optical disk or a track of the data on the optical disk, wherein the beginning of each track is identified in a table of contents for the optical disk.

5 15. The computer program product of claim 12, wherein the output means is selected from a speaker, a set of speakers, a video display or combinations thereof.

16. The computer program product of claim 12, further comprising:

10 converting instructions for converting the data to a different computer readable format before storing the data on the hard disk.

17. The computer program product of claim 16, wherein the format is selected from MP3, WMA, WAV, Ogg, VQF or AAC.

15 18. The computer program product of claim 16, wherein the format is any format that reduces the memory space required to store the data on the hard disk.

19. The computer program product of claim 14, further comprising:

20 recording instructions for recording in an index database information selected from a title of the optical disk, a title of the track written to the hard disk; or combinations thereof;

comparing instructions for comparing the title of the optical disk and the title of track with other titles previously recorded in the index;

25 determining instructions for determining whether the optical disk and the track has previously been written to the hard disk; and

playing instructions for playing the data from the hard disk without re-reading the optical disk if the data has been previously written to the hard disk.

20. The computer program product of claim 19, further comprising:

recording instructions for recording information in the index database selected from artist of the track, artist of the optical disk, date the file was last played from the hard disk, or combinations thereof; and

arranging data in the index database, wherein the data is arranged in groups
5 selected from alphabetically by artist, alphabetically by titles, or by date the file was last accessed.

21. The computer program product of claim 12, further comprising:

searching instructions for searching the hard disk for presence of the data; and
10 playing instructions for playing the data from the hard disk without re-reading the optical disk.

22. The computer program product of claim 12, further comprising:

designating instructions for designating in an index database that a first file is
15 to be permanently stored on the hard disk; and

erasing instructions for erasing automatically from the hard disk a second file not played for a designated set period of time and not designated in the index database that the second file is to be permanently stored on the hard disk, wherein the first and second files contain the data stored on the hard disk at different times.

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23. An apparatus comprising:

means for receiving an instruction to read audio, video or audio/video data from an optical disk within an optical disk player, wherein the data is to be provided to an output means at a known playback rate;

25 means for reading the data from the optical disk at a rate that is greater than the known playback rate;

means for storing the data on a hard disk;

means for providing the data to an output means at the known playback rate while the data is being stored;

means for turning off the optical disk player as soon as the data has been stored; and then

means for continuing to provide the data to the output means at the known playback rate by retrieving the stored data.

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24. The apparatus of claim 23, wherein the means for turning off the optical disk player includes means for turning off a spin motor within the optical disk player.

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25. The apparatus of claim 23, wherein the data is selected from all the data on the optical disk or a track of the data on the optical disk, wherein the beginning of each track is identified in a table of contents for the optical disk.

26. The apparatus of claim 23, wherein the output means is selected from a speaker, a set of speakers, a video display or combinations thereof.

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27. The apparatus of claim 23, further comprising:

means for converting the data to a different computer readable format before storing the data on the hard disk.

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28. The apparatus of claim 27, wherein the format is selected from MP3, WMA, WAV, Ogg, VQF or AAC.

29. The apparatus of claim 27, wherein the format is any format that reduces the memory space required to store the data on the hard disk.

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30. The apparatus of claim 25, further comprising:

means for recording in an index database information selected from a title of the optical disk, a title of the track written to the hard disk; or combinations thereof;

means for comparing the title of the optical disk and the title of track with other titles previously recorded in the index;

means for determining whether the optical disk and the track has previously been written to the hard disk; and

5 means for playing the data from the hard disk without re-reading the optical disk if the data has been previously written to the hard disk.

31. The apparatus of claim 30, further comprising:

10 means for recording information in the index database selected from artist of the track, artist of the optical disk, date the file was last played from the hard disk, or combinations thereof; and

means for arranging data in the index database, wherein the data is arranged in groups selected from alphabetically by artist, alphabetically by titles, or by date the file was last accessed.

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32. The apparatus of claim 23, further comprising:

means for searching the hard disk for presence of the data; and

means for playing the data from the hard disk without re-reading the optical disk.

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33. The apparatus of claim 23, further comprising:

means for designating in an index database that a first file is to be permanently stored on the hard disk; and

25 means for erasing automatically from the hard disk a second file not played for a designated set period of time and not designated in the index database that the second file is to be permanently stored on the hard disk, , wherein the first and second files contain the data stored on the hard disk at different times.